

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (currently amended): A magnetic head, comprising:
 - 2 a substrate;
 - 3 a read head being fabricated upon said substrate;
 - 4 a P1 pole being fabricated upon said read head;
 - 5 an insulation layer being fabricated upon said P1 pole;
 - 6 a P2 pole tip seed layer being fabricated upon portions of said insulation layer;
 - 7 a dielectric material layer being fabricated upon said P2 pole tip seed layer and upon said
 - 8 insulation layer;
 - 9 a P2 pole tip being fabricated upon said P2 pole tip seed layer and within said dielectric
 - 10 material layer;
 - 11 a back gap piece being fabricated within said dielectric material layer and in magnetic
 - 12 interconnection with said P1 pole;
 - 13 an induction coil seed layer being fabricated in part upon said insulation layer and in part
 - 14 upon portions of said dielectric material layer;
 - 15 an induction coil being fabricated upon said induction coil seed layer and within said
 - 16 dielectric material layer;
 - 17 a second insulation layer being fabricated upon said induction coil;
 - 18 a P2 pole yoke being fabricated upon said second insulation layer in magnetic
 - 19 interconnection with said P2 pole tip and with said back gap piece;
 - 20 an encapsulation layer being fabricated above said P2 pole yoke.

1 2. (original): A magnetic head as described in claim 1 wherein said dielectric material layer
2 includes a P2 pole tip trench, an induction coil trench and a back gap piece trench.

1 3. (currently amended): A magnetic head as described in claim 2 wherein said ~~P1~~ P2 pole
2 tip trench, said induction coil trench and said back gap piece trench are formed in a single
3 reactive ion etch fabrication step.

1 4. (original): A magnetic head as described in claim 3 wherein a P1 pole notch is formed in
2 said P1 pole proximate said P2 pole tip.

1 5. (original): A magnetic head as described in claim 4 wherein a P1 pole notching trench is
2 fabricated in said dielectric material layer in a second reactive ion etch fabrication step.

1 6. (currently amended): A hard disk drive comprising:
2 at least one hard disk being fabricated for rotary motion upon a disk drive;
3 at least one magnetic head adapted to fly over said hard disk for writing data on said hard
4 disk, said magnetic head including:
5 a substrate;
6 a read head being fabricated upon said substrate;
7 a P1 pole being fabricated upon said read head;
8 an insulation layer being fabricated upon said P1 pole;
9 a P2 pole tip seed layer being fabricated upon portions of said insulation layer;

10 a dielectric material layer being fabricated upon said P2 pole tip seed layer and upon said
11 insulation layer;
12 a P2 pole tip being fabricated upon said P2 pole tip seed layer and within said dielectric
13 material layer;
14 a back gap piece being fabricated within said dielectric material layer and in magnetic
15 interconnection with said P1 pole;
16 an induction coil seed layer being fabricated in part upon said insulation layer and in part
17 upon portions of said dielectric material layer;
18 an induction coil being fabricated upon said induction coil seed layer and within said
19 dielectric material layer;
20 a second insulation layer being fabricated upon said induction coil;
21 a P2 pole yoke being fabricated upon said second insulation layer in magnetic
22 interconnection with said P2 pole tip and with said back gap piece;
23 an encapsulation layer being fabricated above said P2 pole yoke.

1 7. (original): A hard disk drive as described in claim 6 wherein said dielectric material
2 layer includes a P2 pole tip trench, an induction coil trench and a back gap piece trench.

1 8. (currently amended): A hard disk drive as described in claim 7 wherein said ~~P1~~ P2 pole
2 tip trench, said induction coil trench and said back gap trench are formed in a single reactive ion
3 etch fabrication step.

1 9. (original): A hard disk drive as described in claim 8 wherein a P1 pole notch is formed in
2 said P1 pole proximate said P2 pole tip.

1 10. (withdrawn): A method for fabricating a magnetic head comprising the steps of:
2 fabricating a read head upon a substrate;
3 fabricating a P1 pole upon said read head;
4 fabricating an insulation layer upon said P1 pole;
5 fabricating an RIE etchable dielectric material layer upon said insulation layer;
6 fabricating trenches within said dielectric material layer, including a P2 pole tip trench,
7 an induction coil trench and a back gap piece trench;
8 simultaneously fabricating a P2 pole tip within said P2 pole tip trench and a back gap
9 piece within said back gap piece trench, such that said back gap piece is magnetically
10 interconnected with said P1 pole;
11 fabricating an induction coil within said induction coil trench;
12 fabricating a second insulation layer upon said induction coil;
13 fabricating a P2 pole yoke above said second insulation layer in magnetic interconnection
14 with said P2 pole tip and said back gap piece;
15 fabricating an encapsulation layer above said P2 pole yoke.

1 11. (withdrawn): A method for fabricating a magnetic head as described in claim 10, further
2 including the steps of fabricating a patterned P2 pole tip seed layer upon said insulation layer
3 prior to fabricating said dielectric material layer.

1 12. (withdrawn): A method for fabricating a magnetic head as described in claim 11 wherein
2 said P2 pole tip seed layer is not deposited in a location of said induction coil trench.

1 13. (withdrawn): A method for fabricating a magnetic head as described in claim 10
2 including the further step of depositing an induction coil seed layer within said induction coil
3 trench, subsequent to fabricating said P2 pole tip and back gap piece.

1 14. (withdrawn): A method for fabricating a magnetic head as described in claim 10,
2 wherein said step of fabricating trenches within said dielectric material layer is performed in a
3 reactive ion etch process.

1 15. (withdrawn): A method for fabricating a magnetic head as described in claim 14 wherein
2 said dielectric material layer is comprised of SiO_2 and said reactive ion etch process is conducted
3 utilizing fluorine ion species.

1 16. (withdrawn): A method for fabricating a magnetic head as described in claim 14 wherein
2 said dielectric material layer is comprised of an organic polymer material and said RIE etching
3 process is conducted utilizing an oxygen ion species.

1 17. (withdrawn): A method for fabricating a magnetic head as described in claim 10 wherein
2 a P1 pole notching process is conducted following the fabrication of said P2 pole yoke.

1 18. (withdrawn): A method for fabricating a magnetic head as described in claim 17 wherein
2 said P1 pole notching step includes the steps of RIE etching said dielectric material proximate
3 said P2 pole tip, and ion beam etching said P2 pole tip seed layer, said insulation layer and
4 portions of said P1 pole.

1 19. (withdrawn): A method for fabricating a magnetic head as described in claim 13 wherein
2 said P2 pole tip seed layer is comprised of NiFe, and said induction coil seed layer is composed
3 of copper.